

residue material of sidewall polymer rails left behind on [the] a Al/Cu metal line from the RIE process; and

c) [deionized water] rinse chamber means to remove [water] soluble material in deionized water.

16. (5th Amendment) In a metal etch tool for removing post-RIE polymer rails formed on a Al/Cu metal line of a semiconductor structure, the improvement comprising:

[I.] an integrated metal etch tool interfaceable with:

(a) vacuum chamber means to [provide a mixture of etching gas/acid neutralizing gas of HF/NH₃ to said structure to] form a water soluble residue material of sidewall polymer rails with HF/NH₃ left behind on Al/Cu metal line from the RIE process; and

(b) strip chamber means for down stream etching removal of photo-resist from said structure [by chemical downstream etching or plasma].

CORRECTED VERSION OF THE AMENDED CLAIMS

~~13. (5th Amendment) In a metal etch tool for removing post-RIE polymer rails formed on a Al/Cu metal line of a semiconductor structure, the improvement comprising:~~

J ~~an integrated metal etch tool interfaceable with:~~

- a) strip chamber means to strip photo-resist of a semiconductor composite structure subsequent to a RIE to limit thickness of sidewall polymer rails;
- b) vacuum chamber means to chemically modify sidewall polymer rails with HF/NH₃ to form a water soluble residue material of sidewall polymer rails left behind on a Al/Cu metal line from the RIE process; and
- c) rinse chamber means to remove [water] soluble material in deionized water.

~~14. (5th Amendment) In a metal etch tool for removing post-RIE polymer rails formed on a Al/Cu metal line of a semiconductor structure, the improvement comprising:~~

J ~~an integrated metal etch tool interfaced with:~~

- (a) vacuum chamber means to form a water soluble residue material of sidewall polymer rails with HF/NH₃ left behind on Al/Cu metal line from the RIE process; and
- (b) strip chamber means for down stream etching removal of photo-resist from said structure.